

REMARKS

This is in response to the Official Action mailed on November 13, 2007. Entry of this amendment and allowance is respectfully requested.

The Examiner objected to the Declaration filed, and a new Declaration is enclosed. This requirement is also respectfully traversed. The Applicant has undertaken the duty to disclose all information known to the person to be material to the patentability of this application in accordance with in 37 §C.F.R. 1.56.

It is respectfully submitted that there is absolutely no difference between the wording “material of patentability,” and “material to the patentability,” in that both wordings. **The “materiality” relates to patentability in both forms and not just examination defined by the 37 C.F.R. §1.56 is the governing provision both of the wordings.**

REQUEST TO WITHDRAW FINALITY OF OFFICIAL ACTION

It is respectfully requested that the finality of the Office Action mailed November 13, 2007 be removed, and that this Amendment be entered.

The Kondou et al. patent that was now cited by the Examiner was cited by the Applicant in the Information Disclosure Statement mailed on March 12, 2002. The reference has not been raised or relied upon until this Official Action. Further, in the Examiner’s “response to amendment” contained in the last Official Action, there was no mention that the amendments previously made had necessitated the citation of Kondou et al. Therefore, it is respectfully believed that a final action based on of the Kondou et al. patent, which was included in the prior art over 5 ½ years ago and just now relied upon is not appropriate, and withdrawal of the finality of the last Office Action is respectfully requested.

ARGUMENTS FOR ALLOWABILITY OF THE CLAIMS

By this amendment, Applicant has placed the case prima facie in condition for allowance. Independent claims 1 and 12 have been amended, and independent claim 25 has been cancelled. Dependent claims 3, 4, 5, 7, 8, 10, and 18-25 are cancelled.

Reconsideration of the two independent claims, and their dependent claims which remain in the case, namely claims 1 and 12 and their dependent claims, is respectfully requested.

In regard to the rejection of claim 12 and its dependent claims under 35 U.S.C. §112, claim 12 has been amended to clarify the language, and it is believed that the arrangement of the burn-in boards, and the fan trays which are spaced from the burn-in boards and which, in connection with an overlying burn-in-board form a flow through duct, through which air flows from an inlet to an exhaust is set forth clearly. Thus, it is believed that the rejection under 35 U.S.C. §112 is overcome.

Claims 1, 6, 7, 10, 12, 16 and 25 were rejected under 35 U.S.C. §102(b) as being anticipated by the Kondou et al. patent 5,361,188. At the outset, it is respectfully believed that the Examiner's statement that Kondou et al. discloses a burn-in oven having a heat control system is incorrect. The Kondou device is specifically only a cooling device for operating electronic equipment, and is not a burn-in oven that is used for testing electronic equipment at elevated power consumption and/or heat. The concept of the Kondou device is to cool operating circuits in a computer and is concerned only with overheating of the components. The lack of control is shown quite clearly by the arrangements where various openings are used without any fans. Where fans are talked about or discussed in Kondou, they are merely cooling devices that are not in any way used for controlling a temperature level of individual circuits, but rather they are to provide enough air so that the circuits will not overheat. This is a substantial difference from the burn-in oven of the present claims.

Further, the Kondou reference does not provide for a plenum chamber that carries flow through cooling air with controlled fans to direct air onto the test device, to maintain the device within a temperature range. In the present claims 1 and 12, cooling air is only supplied when the fans are running. Claim 1 has been further amended to clearly indicate that the air flow in the duct continues to the exhaust from the oven chamber when the fans are not directing air through the fan openings.

Because the test components have to be maintained within a set temperature range, the flow through feature means that the air flow pressure can be kept low so there are no significant air leaks through a non operating fan that would keep the temperature lower.

Further, claim 12 includes the features of having the separate temperature sensor for each device under test to sense the temperature of that device and control the fan for that device. While it was mentioned in the Kondou specification that the Kondou fans had temperature sensors, the statement on page 5 of the Official Action, that there is a controller that selectively controls the operation of each fan as a function of a “temperature signal provided from the device under test” is incorrect. First there is no device under test in Kondou. The components are operating devices. Secondly the only indication of any temperature sensing is that Kondou et al. has temperature sensors on the fans themselves, and not on any package or circuit that generates heat and where a temperature signal from that device is used to control fans for cooling.

In general summary, the Kondou et al. device does not comprise a burn-in oven that is used for heating components that are being tested; it does not have components that are being tested at all; it does not have any teaching of a flow through cooling air conduit where air is directed to a device under test only through fans. The fans are controlled by the temperature of the device under test in claim 12. The entire concept in Kondou is for cooling operating components in a computer, not utilizing a burn-in oven testing circuit devices that operate at elevated temperatures.

The structures of claims 1 and 12, the independent claims, both involve the use of a burn-in oven with heaters for maintaining the temperature of the circuits being tested at a desired level, and providing controllable cooling by sensing a temperature of each device itself. This is not sensing the temperature of the fan, as in Kondou.

Claim 1 also includes the feature that the air flow in the respective duct which is not directed by a fan through a fan opening, flows to the exhaust from the oven chamber. The structure provides for a flow through of air and is not a dead ended air flow duct, which causes a rise in the pressure of the air in the duct.

The duct shown in FIGS. 2 and 7 of the Kondou et al. patent show that the air pressure forces air through the openings, and in the showing where fans are included, such as FIG. 10, the air pressure force air out of the duct onto the circuit packages. This is fine where

cooling only is desired, but where temperature control is desired, as with the present device, the cooling air is provided only by the fans when they are powered.

FIG. 22 of Kondou et al. shows an incomplete structure, and the only teaching for the handling of cooling air in Kondou et al., where cooling is desired for operating components is with a closed end air carrying duct that is shown in FIGS. 7 and 9. The air is then likely to be forced through the fans even when they are not operating, or through openings that are provided for this cooling effect. Additionally, to illustrate that the Kondou structure is contrary to the precise control of the present claims, the flow onto a device under test in the present claims is essentially controlled by the fan and operated only when the fan is powered to provide a controllable flow.

In claim 12, the feature is that the controllable flow is adjusted by a controller that provides the cooling air by operating the fan only when the temperature sensor that is on the device under test indicates that cooling air is necessary.

These features are believed non-obvious over the teachings of Kondou et al, which again is concerned only with a cooling operating circuit such as for a computer and not for test devices.

Claims 2, 13, and 14 were rejected as being unpatentable over Kondou et al. , in view of Hamilton et al. U.S. Patent No. 5,582,235. The Examiner indicated that Kondou showed the invention, as described in the rejection of claims 1 and 12, the parent claims. Claims 2, 13 and 14 are allowable for the reasons of record with their parent claims. However, the addition of the damper control which was stated to be known in the art by Hamilton et al., in this particular combination provides for controlling the air flow that is in the ducts from which the fans lead, to a level that will permit the fans to be the substantial sole control flow wave of air flow for cooling the devices under test. It is respectfully believed that these claims lead to a new combination.

Claims 9, 11, 15 and 17 were rejected as being unpatentable over Kondou in view of the Frederman et al. patent No. 6,504,392. Again, the overall combination specified in these claims is believed to be allowable with their parent claims. The air flow for cooling air can be

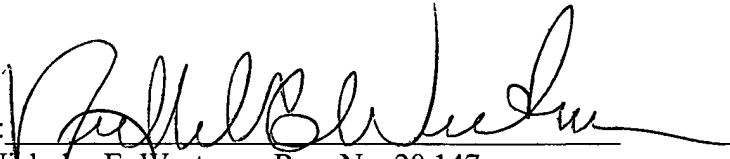
maintained through several adjacent ovens, and the fans control the cooling air going to the devices under test.

In view of the above, it is respectfully requested that favorable action be granted.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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